Older Driver Working Group
Proposed Strategy for Presentation to the NC ECHS
October 24, 2006

Strategy – Improve Signage at Non-Standard Interchange Approaches

General Description

One of the first challenges members of the NC Senior Driver Safety Coalition were called upon to address was a problem in knowing which lane to be in to access an Interstate or other limited access freeway. The problem arises when traveling on a multi-lane minor roadway where, depending on the interchange design (typically either a "diamond" or "cloverleaf"), a driver may need to position himself in the outside lane for a right-hand turn or the inside lane for a left-hand turn. The situation is exacerbated by non-standard interchange designs, and, of course, for drivers unfamiliar with a particular interchange (i.e., non-local travelers). Older drivers can find such interchanges especially challenging if required to maneuver their vehicle quickly into another lane for turning, and may even become confused and turn onto an exit ramp by mistake. At the very least, they become frustrated when they miss their turn and have to backtrack for a second approach.

In a review of hazardous intersection locations involving an overrepresentation of drivers age 65+, all three of the interchange locations with high numbers of older driver crashes involved a similar non-standard design in which entrance and exit ramps are all on the same side of the roadway (as is the case at I 440 and Hillsborough Road in Raleigh). It was decided that especially at these non-standard interchange design locations, additional signage may be an effective means of alerting drivers and improving safety.

Work has already been carried out by the Traffic Engineering and Safety Systems Branch, with input from senior members of the NC Senior Driver Safety Coalition, to develop improved signage and signage placement protocols to address this problem. The recommended signage has been approved by appropriate DOT staff and funds allocated to produce and install the signs at 10 locations over the coming months. This strategy would allow for continued pilot testing of the intervention and potential extension statewide.

Technical Attributes	
Target Audience	The primary target audiences for this strategy are older adults and drivers of any age traveling on unfamiliar roadways.
Expected Effectiveness	The proposed signs are variations of standard designs and have not been previously evaluated. Current plans are to install the new signage at 10 locations across the state, with a focus on locations having an over-representation of crashes involving older drivers. Crash data will be collected over a one-to two-year period, and before/after comparisons made to evaluate the effectiveness of the new signage in reducing crashes. Driver interviews or surveys may also be conducted to obtain public opinion on the new signage and its perceived safety benefits.
Keys to Success	Keys to the successful implementation of this strategy include a detailed review of crash patterns at the targeted, high-risk intersections, and direct involvement of older drivers in

	developing solutions to address identified problems.
Potential Difficulties	Any proposed modification to existing signage standards must be approved through appropriate NCDOT channels. For the strategy currently proposed, approval has already been obtained for an initial pilot test of the new signage.
Appropriate Measures and Data	Appropriate measures for evaluating the effectiveness of the proposed strategy include number of crashes at the treated sites before and after treatment, along with changes in the types of crashes occurring at the sites and the age distribution of crash-involved drivers. In addition, self-report data may be collected on perceived safety benefits from older drivers living near the site or passing through the area. It is assumed that the results of these evaluation activities will be documented in a report that will be made available to members of the ECHS Older Driver Working Group.
Associated Needs	NCDOT support is needed to produce, install, and carry out a pilot evaluation of the proposed signage change.
Organizational, Institutional, and Policy Issues	None.
Issues Affecting Implementation Time	Time required to receive approval for the signage, time to install the signage at selected locations, and time to allow for sufficient crash data to accumulate to evaluate the safety effects of the signage;
Costs	*To be provided by DOT Traffic Engineering and Safety Systems Branch*
Training and Other Personnel Needs	None required.
Legislative Needs	None identified.

Resources

Proposed signage modifications available from Kevin Lacy, NCDOT.